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THE PLANT DISEASE REPORTER

ISSUED BY
THE OFFICE OF MYCOLOGY AND DISEASE SURVEY

SUPPLEMENT 65

Diseases of Forest and Shade Trees, Ornamental and Miscellaneous

Plants in the United States in 1927

December 31, 1928



BUREAU OF
PLANT INDUSTRY
UNITED STATES DEPARTMENT OF AGRICULTURE

DISEASES OF FOREST AND SHADE TREES, ORNAMENTAL AND MISCELLANEOUS PLANTS
IN THE UNITED STATES IN 1927

Plant Disease Reporter
 Supplement 65

December 31, 1928.

Prepared by
 G. Hamilton Martin, Assistant Pathologist,
 Office of Mycology and Disease Survey.

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FOREWORD

This summary of the diseases of forest and shade trees, ornamental and miscellaneous plants in the United States in 1927 follows the same general plan as those of the preceding years. The sources upon which the information is based are as follows: (1) collaborators, (2) specialists in the Office of Forest Pathology, (3) articles in botanical journals, and (4) special reporters.

Many reports of new occurrences were received for 1927 both for individual states and for the United States. In the accompanying summary these first occurrences are given which have been obtained from literature, from the Mycological Herbarium of the Bureau of Plant Industry, or from past records of the Plant Disease Survey. Many diseases have been omitted due to their unimportance or to the fact that they have been reported in other years. It is not the object of this summary to enumerate all of the diseases that have been reported during the year, but to give facts concerning only some of the more important ones. "Standardized Plant Names" has been used as the source for the names of the hosts.

Where specimens are not indicated, the report is based on the authority of the person cited. The date given is that of its earliest reported appearance in 1927.

The following symbols are used: * indicates a specimen in the Mycological Herbarium; + preceding disease indicates the first report of the disease to the Plant Disease Survey; + preceding state indicates the first report from the state to the Plant Disease Survey; P.r. indicates prior reports of the disease to the Plant Disease Survey or from the Mycological Herbarium.

References have been given and in some instances brief abstracts made of recent articles which may be of service to those who do not have access to all botanical journals.

D I S E A S E S O F C O N I F E R S

ABIES AMABILIS, Cascade fir.

- +Herpotrichia nigra Hartig, matting.

Oregon - Clackamas and Multnomah Counties, April 3; 4,000 feet altitude
(Boyce).

- Peridermium sp., rust.

Oregon - (Boyce).

ABIES GRANDIS, great silver fir.

- +Hypodermella abietis concoloris Dearn., needle cast.

Idaho - on old needles; sparse; elevation 3,000 feet; Clarkia, June 24.
(Boyce).

- +Phomopsis sp., canker.

Montana - Lincoln and Mineral Counties, August 26. (Boyce).

Idaho - causing cankers and killing branches on trees from saplings to
mature trees; abundant; elevation 3,000 feet; Kootenai and Shoshone
Counties, June 24. (Boyce).

- +Uredinopsis macrosperma (Cke.) Magn., rust.

Idaho - elevation 3,000 feet; rare; Shoshone County, June 24. (Boyce).

British Columbia - elevation 20 feet; Vancouver Island, July 20.
(Boyce).

ABIES LASIOCARPA, Alpine fir.

- +Botrytis cinerea Pers., wither tip.

British Columbia - killed current season's shoots; frequent; elevation
4,500 feet; near Edgewood, August 30. (Boyce).

- +Hypodermella abietis concoloris Dearn., needle cast.

Oregon - elevation 4,000 feet; occasional; Clackamas County, June 19.
(Boyce).

- +Lophodermium nervisequium (DC.) Rehm, needle cast.

*Montana - Bozeman; September 6, 1925; collected P. A. Young; determined
W. W. Diehl.

- +Macrophoma parca (B. & Br.) Berl. & Vogl.

*Montana - Bozeman, September 6, 1925; collected P. A. Young; determined
W. W. Diehl.

- +Phomopsis sp., canker.

Montana - very abundant in all age classes, in some cases killing 25
per cent of the branches; Flathead County, August 24. (Boyce).

CEDRUS DEODARA, Decdar.

- +Phoma sp.

*Mississippi - Grenada, March 30; collected G. R. Fulton; determined N.
O. Howard.

Limb blight - (undetermined).

Texas - serious in restricted localities. (Taubenhaus).

CHAMAECYPARIS SPP., white cedar, cypress, retinospora.

Gymnosporangium botryapites (Schw.) Kern, rust.

Connecticut - on C. thyoides; Bethany, May 17. (Clinton).

New Jersey - Atlantic County, June. (White).

- +Pestalozzia sp., tip dieback, needle blight.

New Jersey - on C. pisifera plumosa and C. pisifera squarrosa and
C. thyoides ericoides; found on dead scions in greenhouse

and also on dead needles and twigs in center of plants, May 27 and September 2. (White).

+*Phomopsis juniperovora* Hahn, nursery blight.

*Kansas - Manhattan, November 1926. Collected D. V. Layton; determined G. Hamilton Martin.

CRYPTOMERIA JAPONICA LOBBI, Lobb *cryptomeria*.

+*Pestalozzia* sp., dieback.

New Jersey - on young stock; local; Springfield, August 3. (White).

JUNIPERUS SPP., juniper, red cedar.

Lophodermium juniperinum (Fr.) DeNot., leaf cast.

+Connecticut - new to state, appeared to be cause of death of leaves; common locally; Norfolk, June 24. (Clinton).

+British Columbia - elevation 3,800 feet; September 4. (Boyce).

P.r.: *Colorado, *Iowa.

Phomopsis juniperovora Hahn, nursery blight:

+Connecticut - on *J. virginiana* *cannarti*, *J. scopulorum*; bad nursery seed beds; Cheshire, August 17. (Clinton).

+New Jersey - on *J. virginiana*, *J. scopulorum argentea*, *J. chinensis*, *J. communis*, *J. squamata meyeri*, and *J. excelsa stricta*; Cologne, February 21. (White).

Iowa - on *J. virginiana*; about a 20 per cent total loss in nurseries; scattered; June 1. (Archer).

Kansas - very serious in eastern half of state. (Elmer).

LARIX SPP., larch.

Dasyscypha calycina (Schum.) Fekl., larch canker.

+Massachusetts - Hamilton, August 2. (Graves, 18).

Connecticut - on *L. laricina*; found in several places in the state. (Clinton).

From Montana comes the following report from J. C. Boyce:

"Collected by Stillinger four miles north of Belton, Flathead, County, August 24; only two specimens found; in one case the fungus was saprophytic on a dead branch and in the other it was parasitic on the main trunk of a tree about 8 feet tall. Species agrees with description of *D. calycina*."

Specimens of what appears to be the same or at least a very similar fungus have been received by this office from New Jersey, Michigan, Idaho and Washington.

Recent literature: Spaulding, 47; Anon., 3; Metcalf, 36; Plassmann, 42.

+*Fusarium* spp., damping off.

New Jersey - on seedlings; general; Washington's Crossing, August 9. (White).

LIBOCEDRUS DECURRENS, incense cedar.

+*Lophodermium pinastri* (Schrad.) Chev., needle cast.

Oregon - Blue River, March. (Zeller, 57: 137).

PICEA SP., Spruce.

+*Botrytis* sp., tip blight.

New Jersey - on *P. conica*; *P. excelsa*, *P. pungens aurea*, *P. pungens glauca*, *P. pungens kosteri*, *P. orientalis*; general; New Brunswick, June 22. (White).

+*Fusarium* sp., damping off.

New Jersey - on *P. excelsa* and *P. pungens*; local; August. (White)

PINUS ALBICAULIS, whitebark pine.

+*Dasyscypha fuscousanguinea* Rehm, canker.

British Columbia - on a small tree about 6 feet high, cankers killing part affected, on another tree about 7 feet high, canker was on main stem and branch about 3 feet from ground. (Boyce).

PINUS FLEXILIS, limber pine.

+*Lophodermium pinastri* (Schrad.), Chev., needle cast.

Montana - Bozeman, September 7, 1925; collected by P. A. Young; determined by W. W. Diehl.

PINUS MONTANA MUGHUS, Mugho pine.

+*Pestalozzia* sp., needle blight.

New Jersey - local; Pennington, August 5. (White).

PINUS MONTICOLA, western white pine.

+*Armillaria mellea* (Vahl) Quel., root rot.

Idaho - occasional; elevation 3,000 feet; killed small trees; no sporophores present, only rhizomorphs; near Clarkia, Shoshone County, June 26. (Boyce).

+*Cucurbitaria pithyophila* (Fr.) Ces. & de Not.

Washington - general; elevation 1,200 to 3,000 feet; May 13, 1927. (Boyce).

+*Dasyscypha calicyformis* (Willd.) Rehm, canker.

British Columbia - in the three instances collected it was secondary on a canker caused by *Cronartium ribicola*; May 6. (Boyce).

Lophodermium pinastri (Schrad.) Chev., needle cast.

+Oregon - severely parasitic on planted trees; elevation 3,800 feet; Clackamas County, June 9. (Boyce).

PINUS PONDEROSA, western yellow pine.

Cronartium harknessii (Moore) Meinecke, rust.

**South Dakota - Pine Ridge Reservation, June. (Evans).

British Columbia - abundant; killing numerous twigs and branches; elevation 1,100 feet; August 4. (Boyce).

PINUS RESINOSA, red pine.

+*Cenangium acuum* Cke. & Pk., leaf and twig blight.

New York - local; Ithaca. (Welch).

+*Cronartium cerebrum* (Pk.) Hedgc. & Long, rust.

Minnesota - general in northern part of state; Crow Wing County, May 22. (Sect. Pl. Path.)

PINUS STROBUS, white pine.

Cronartium ribicola Fisch., blister rust.

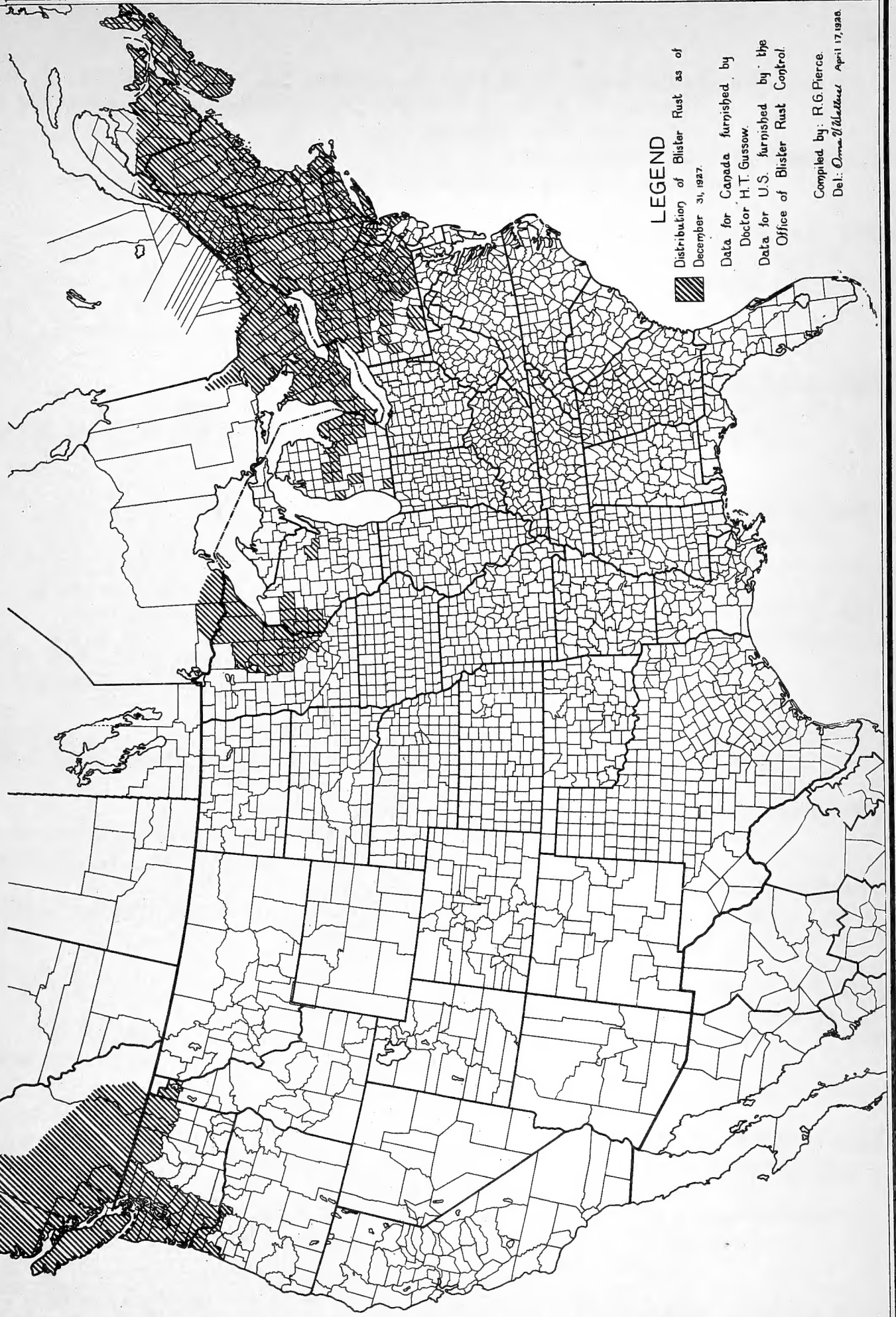
(See map, Fig. 9).

Hypoderma lineare (Pk.) Thuem., needle cast.


+Connecticut - Tolland County, June 16., (Clinton).

FIG. 9

REGIONS INFECTED WITH WHITE PINE BLISTER RUST - 1927



LEGEND

 Distribution of Blister Rust as of
December 31, 1927.

Data for Canada furnished by
Doctor H.T. Gussow.
Data for U.S. furnished by the
Office of Blister Rust Control.

Compiled by: R.G. Pierce.
Del: *Oma Matthews* April 17, 1928.

+*Phoma caudata* Dearness & Overholts, canker.

Pennsylvania - common as a canker on trunks of young pines growing near large ant hills; parasitism not well established as yet; Center County. (Thurston).

PINUS SYLVESTRIS, Scotch pine.

Cronartium comptoniae Arth., rust.

+New Jersey - local; May. (White & Rex).

+*Sphaeropsis* sp., needle blight.

New Jersey - scattered; Moorestown, September 2. (White).

PSEUDOTSUGA DOUGLASII, Douglas fir.

+*Armillaria mellea* (Vahl) Quel., root rot.

Oregon - killing a tree four inches in diameter; elevation 800 feet; Columbia County, July 13. (Boyce).

Botrytis cinerea Auct., gray mold twig blight.

+New Jersey - local; Bound Brook, July 8. (White).

+Oregon - frequent; killing current season's shoots on planted trees; elevation 800 feet; Clackamas County, June 9. (Boyce).

+*Fusarium* sp.

Washington - saprophytic on saplings following winter injury; elevation 700 feet; King County, July 31. (Boyce).

+*Phomopsis* sp., canker and top killing.

Washington - frequent; cankers on trees up to 6 feet tall, killing top or side branches; on taller trees killed side branches only; elevation 500 feet; Snohomish County, September 13. (Boyce).

+*Poria incrassata* (Berk. & Curt.) Burt, dry rot.

Washington - the most destructive decay in buildings in the Pacific Northwest; Cowlitz County, September 21. (Boyce).

Rhabdocline pseudotsugae Sydow, needle cast.

Montana - 1926 needles heavily infected; Park County, May. (Boyce).

+Washington - unusually prevalent, probably due to the moist cool summer; killing all 1925 needles on infected trees; Kitsap (May 3) and Lewis (April 28) Counties. (Boyce).

Oregon - Columbia (July 15) and Yamhill (May 8) Counties. (Boyce).

TAXUS CANADENSIS

+*Metasphaeria taxicola* Pk., leaf and twig blight.

New York - apparently favored by early spring rains. (Welch).

+*Pestalozzia* sp., die back.

New Jersey - local; Bridgeton, September 9. (White).

THUJA SP., arborvitae.

+*Ozonium omnivorum* Shear, root rot.

Texas - severe on both nursery and home plantings; Hidalgo County. (Bach).

+*Pestalozzia* sp., tip blight.

New Jersey - local; on several species; North Branch, August 2. (White).

Mississippi - Jackson, October. (Wedgworth).

Phoma sp.

+Mississippi - Grenada, March 30 (Wedgworth).

Phomopsis sp., blight.

- *+South Carolina - St. Matthews, November. (Ludwig).
 +Rhizoctonia sp., seedling damping off.
 Texas - (Taubenhaus).

D I S E A S E S O F H A R D W O O D S

ACER PALMATUM, Japanese maple.

- +Gloeosporium sp., anthracnose.

Connecticut - New Haven County, June 12. (Clinton).

ACER PLATANOIDES, Norway maple.

Gloeosporium apocryptum Ell. & Ev., anthracnose.

- +Missouri - severe local defoliation; Cape Girardeau County. (Scott).

Nectria cinnabarina Fr., canker.

- +Missouri - Atchison County. (Archer, Gilman, Scott).

ACER RUBRUM, red maple.

- +Taphrina lethifer (Pk.) Sacc., leaf blister.

New York - general throughout Adirondack region. (Welch).

ACER SACCHARUM, Sugar maple.

- *+Septobasidium pseudopedicellatum Burt.

Kentucky - Ordway, February 19. (Valleau).

ACER SPP., Maple.

Nectria cinnabarina Fr., canker.

- *+Maine - Knox County, September. (Folsom).

Verticillium sp., wilt.

The following report has been received from G. F. Gravatt; Office of Forest Pathology:

"There has been no unusual development in this disease, as far as shown by very limited inspection work and by reports received. In the general region from the Mississippi River eastward and from Virginia northward, trees have been noted or reported as infected or killed at different points, but no such epidemic as took place in some Virginia cities in 1924 and 1925 has been noted. In 1924 and 1925, maple trees died by the hundreds in Roanoke, Virginia, and in some towns in that section, but general observations made each year since 1925 show a marked diminution in the destructiveness of the disease in that region. Possibly drought or some other climatic factor weakened the trees during those years so that they were more easily killed by the Verticillium fungus.

"During 1927, this disease was reported from several places in Michigan, from Ohio by Curtis May, from Pennsylvania by several persons, from Massachusetts by W. H. Rankin and others at several different places, from Connecticut, from New York by A. H. Graves, W. H. Rankin and others, from Maryland, from the District of Columbia, and from Virginia. Only a very small percentage of the trees were noted or reported as affected in these states, but the disease continues to be a factor of importance. Dr. Rankin

thinks that the wilt is of more importance in Massachusetts towns than in previous years.

"During 1927, one Norway and one sugar maple seemed to be killed by a combination of illuminating gas and the *Verticillium*. Another interesting observation is that a few trees with the *Verticillium* fungus growing in the trunk and some of the branches have lost no limbs for the past eight years, though growth has been slow. The usual progress of the disease is much more rapid. In a few instances, the *Verticillium* fungus has been isolated from wood which did not show the usual green or dark streaks in the sapwood of the part cultured.

"G. H. Berkeley, on pages 91-100 of the Report of the Division of Botany, of the Canadian Department of Agriculture, for the year 1926, published in 1927, has given the results of a cultural study of the forms of *Verticillia*. Three isolations from the maple were placed in the species *Verticillium ovatum* and one isolation from the maple is given simply as *Verticillium* sp. in a strain group by itself."

AESCULUS SPP., buckeye, horse chestnut.

Guignardia aesculi (Pk.) V. B. Stewart, leaf blotch.

Reported from Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Virginia, Kentucky, South Carolina, *Ohio, Iowa, Missouri, +South Dakota.

Uncinula flexuosa Pk., powdery mildew.

*Connecticut - Simsbury, September 8. (Bender).

+Iowa - in northern part of state. (Archer).

AMELANCHIER ELLIPTICA.

***Dimerosporium collinsii* (Schw.) Thuem.

Montana - Bozeman; collected by P. A. Young; determined by F. B. Cotner and W. W. Diehl.

AMELANCHIER GLABRA

***Fabraea maculata* (Lev.) Atk., leaf blight.

Montana - Bozeman; collected by P. A. Young; determined by W. W. Diehl.

AMELANCHIER SPP., shadblow, serviceberry, juneberry.

Nummularia discreta (Schw.) Tul., blister canker.

+Iowa - (Archer).

Phyllosticta paupercula Pk., leaf spot.

**Montana - Bozeman; collected by P. A. Young; determined by W. W. Diehl.

CASTANEA DENTATA, chestnut.

Endothia parasitica (Murr.) P. J. and H. W. Anderson, blight.

The following report has been received from R. B. Clapper, Office of Forest Pathology:

"Survey work to determine the distribution of the chestnut blight was carried on by the Office of Forest Pathology in 1927 to a lesser extent than in the three previous years. Reports were made by members of this office who made trips in the

Southern Appalachians incidental to other work. In addition to the reports thus obtained, reports were received from state and extension pathologists and foresters, members of the United States Forest Service, county agents, timber men and other parties who come in contact with the chestnut problem.

"For convenience in mapping and otherwise recording the spread of the blight, classes of infection have been adopted as follows: 1-9 per cent; 10-29 per cent, 30-79 per cent and 80-100 per cent. At this time, of 200 chestnut producing counties in the Southern Appalachians, not one has an estimated infection of less than 1-9 per cent of the trees infected. The number of counties in this class of infection has been decreasing since 1925, the counties having become more heavily infected. At present, in the 1-9 per cent class of infection, there are four counties in Tennessee and nineteen in Kentucky. In a year or two the infection in these counties will be sufficient to place them in the 10-29 per cent class, and the 1-9 per cent class will be eliminated.

"In 1924, when the first extensive survey was made by the Office of Forest Pathology, it was found that, of 200 chestnut producing counties in the Southern Appalachians, 42, or 21 per cent, had reached an infection of 60 per cent or more. Up to and including 1927, 90 counties, or 45 per cent, have reached an infection of 60 per cent or more. By the end of 1930, most of the remaining 110 counties will have reached 60 per cent infection, the degree of infection at which dead chestnut trees begin to appear in most stands.

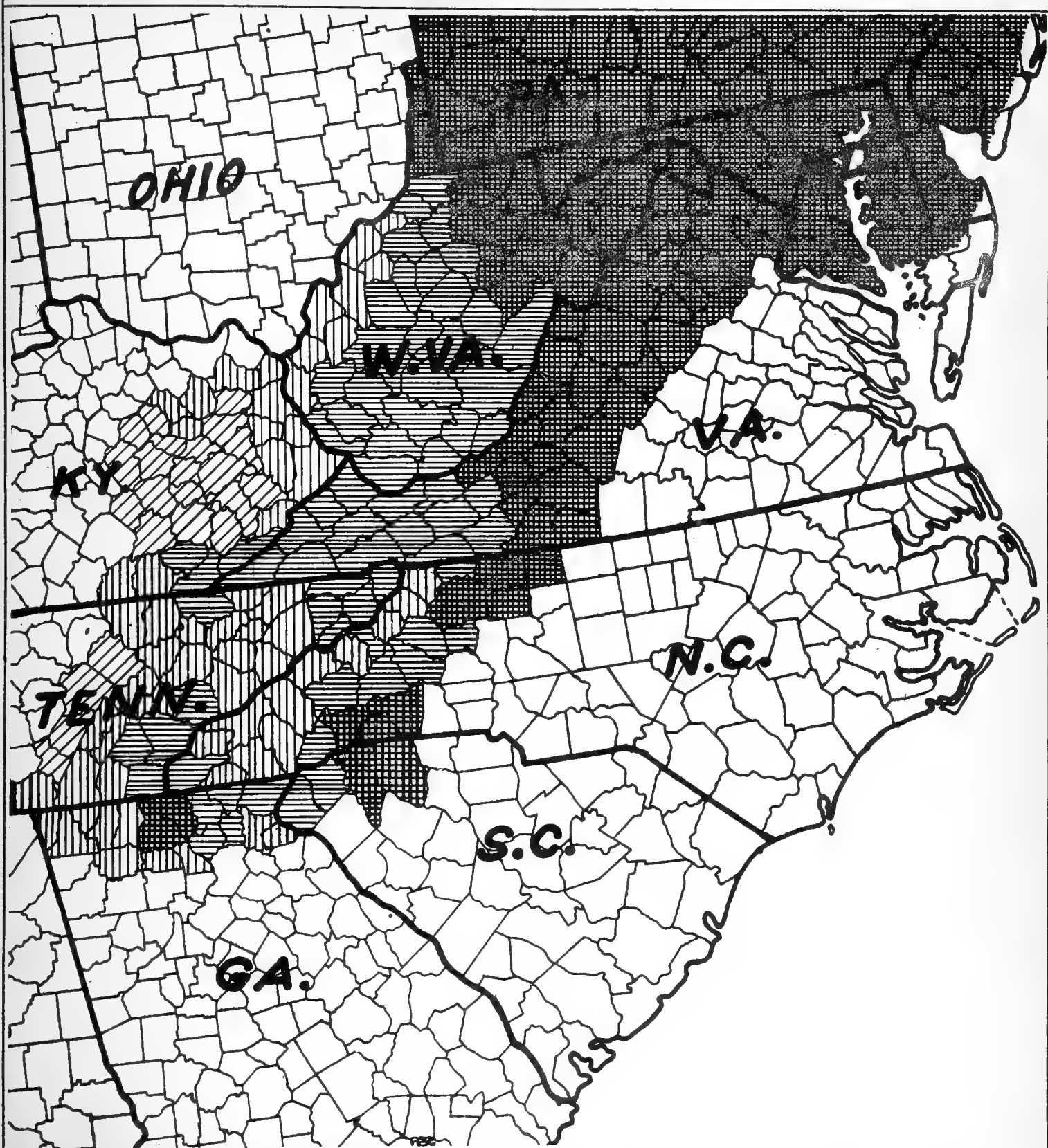
"A survey for blight resistant chestnut trees was carried on by members of the Office in Pennsylvania and West Virginia. Many persons owning or knowing about chestnut trees withstanding the blight were asked to furnish nuts and scions for reproduction and further study of their resistance. Most of the specimens received were from exotic chestnuts, varieties of Japanese chestnuts having the greatest representation. There are specimens of *Castanea dentata* still surviving the attacks of the blight, around New York City and in eastern Pennsylvania. The factors accounting for the survival of these trees are being studied.

"Chestnut blight was reported in Iowa by W. A. Archer in The Plant Disease Reporter, Vol. XI, No. 13, November 1, 1927. Three trees of medium size in the northern part of the state were killed back to the roots by *Endothia parasitica*. This infection was undoubtedly the result of an importation of infected nursery stock from the eastern infected states.

"In September, 1927, Dr. D. V. Baxter of the Office of Forest Pathology, located a diseased chestnut tree on Shady Mountain, near Birmingham, Alabama. The causal organism was identified by Dr. Shear as *Endothia parasitica*. This infection could very probably have originated by the natural dissemination of spores from blighted regions in southeastern Tennessee, or northwestern Georgia. The blight was found in Alabama some years ago at two different places on nursery trees from the infected northern states. These two infections were destroyed and as there was practically no native chestnut growth in their vicinity, it

DISTRIBUTION OF CHESTNUT BLIGHT

FIG. 10

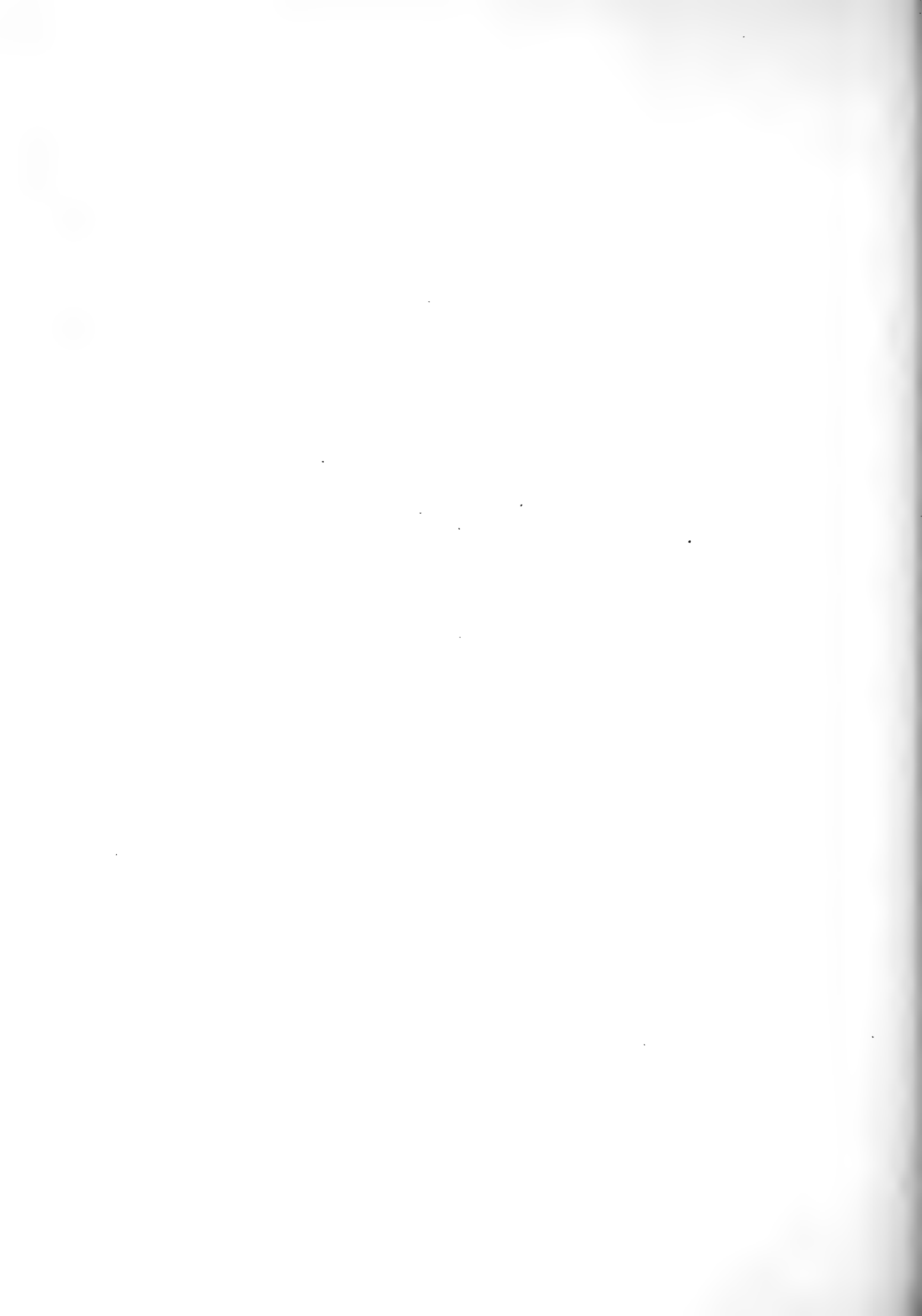


ESTIMATED PERCENT OF INFECTED CHESTNUT TREES

 1-9  10-29  30-79  80-100

JAN. 1928

OFFICE OF FOREST PATHOLOGY, U.S.D.A.



is thought that the recent spread into this state has been by natural means."

CRATAEGUS MONOGYNA, English hawthorn.

+Bacillus amylovorus (Burr.) Trev., blight.

Iowa - moderate blighting of limbs and twigs of host on campus at Ames; June 15. (Archer).

ELAEAGNUS ANGUSTIFOLIA, Russian olive.

**Septoria elaeagni (Chev.) Desm., leaf spot.

Kansas - Franklin County; collected by D. V. Layton; determined by G. Hamilton Martin.

GLEDITSIA TRIACANTHOS, honeylocust.

Microsphaera alni (Wallr.) Wint., powdery mildew.

**New Mexico - Dona Ana County, September 6. (Crawford).

HICORIA SP., hickory.

Microstroma juglandis (Bereng.) Sacc., witches' broom.

+Connecticut - scattered; appears to be unusually common on forest trees; Tolland County, June 13. (Clinton).

JUGLANS CINEREA, butternut.

Gnomonia leptostyla (Fr.) Ces. & DeNot., anthracnose.

+New York - very common, Tompkins County, July. (Chupp).

+Connecticut - New Haven County, July 13. (Clinton).

JUGLANS NIGRA, black walnut.

Microsphaera alni (Wallr.) Wint., powdery mildew.

+Iowa - local. (Archer).

MALUS ARNOLDIANA.

+Gymnosporangium juniperi-virginianae Schw.

Connecticut - Fairfield County, July 20. (Bender).

MALUS ANGUSTIFOLIA, southern crab.

Gymnosporangium juniperi-virginianae Schw., rust.

**Tennessee - Knoxville, September. (McClintock).

MALUS CORONARIA, wild sweet crab apple.

Bacillus amylovorus (Burr.) Trev., blight.

+Pennsylvania - rather common on host in wild condition, Center and Clinton Counties, May 30. (Thurston).

MALUS FLORIBUNDA, Japanese flowering crab.

+Gymnosporangium germinale (Schw.) Kern, rust.

Connecticut - general; 47 reports mostly from nurseries. (Bender).

+Leptothyrium pomi (Mont. & Fr.) Sacc., flyspeck.

Florida - (West).

MALUS FLORIBUNDA ATROPURPUREA, purple crab.

**Phyllosticta sp., leaf spot.

Iowa - Shenandoah, September 1926. (Archer).

MALUS SARGENTI

Gymnosporangium juniperi-virginianae Schw., rust.

Connecticut - Fairfield County, July 20. (Bender).

OSTRYA VIRGINIANA, hophornbeam.

Microsphaera alni (Wallr.) Wint., powdery mildew.

+Indiana - White County, October 8. (Gardner).

PLATANUS SP., sycamore planetree.

Gnomonia veneta (Sacc. & Speg.) Kleb., anthracnose.

Reported from Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, +Mississippi, Arkansas, Ohio, Indiana, Missouri, Kansas.

Microsphaera alni (Wallr.) Wint., powdery mildew.

+New Jersey - Germania, July 28, (White).

POPULUS ALBA, white poplar.

***Cytospora nivea* (Hoffm.) Sacc., canker.

Massachusetts - Amherst, August 10; collected by R. J. Haskell; determined by G. G. Hedgcock.

POPULUS ANGUSTIFOLIA, narrowleaf cottonwood.

***Septoria musiva* Pk., leaf spot.

Montana - Bozeman; collected by P. A. Young; determined by A. E. Jenkins.

POPULUS DELTOIDES, southern cottonwood.

Dothichiza populea Sacc. & H. Briard, canker.

+Connecticut - Fairfield County, July 29. (Bender).

POPULUS NIGRA ITALICA, Lombardy poplar.

Dothichiza populea Sacc. & H. Briard, canker.

**Kentucky - Lexington, April 18. (Valleau).

+*Marssonina populi* (Lib.) Magn., leaf spot.

Indiana - on nursery stock; Marion County, June 28. (Gardner).

POPULUS SARGENTI, Sargent cottonwood.

***Septoria musiva* Pk., leaf spot.

Utah - Roosevelt, August 10. (Linford).

POPULUS TRICHOCARPA, black poplar.

Trametes peckii Kalchbr., rust.

+Oregon - Marion County. (Boyce).

POPULUS SP., poplar, cottonwood, aspen.

Cytospora chrysosperma (Pers.) Fr., canker.

Reported from +New Jersey, Pennsylvania, +Wisconsin, Minnesota, Iowa, Colorado, Utah, Idaho, +Oregon.

Dothichiza populea Sacc. & H. Briard, canker.

Reported from Massachusetts, Connecticut, Pennsylvania, Maryland, +Virginia, Kentucky, +Louisiana, Indiana, Wisconsin.

PRUNUS MELANOCARPA.

***Coccomyces hiemalis* Hig., leaf spot.

Montana - Bozeman; collected P. A. Young; determined W. W. Diehl.

PRUNUS VIRGINIANA, chokecherry.

Exoascus confusus Atk., fruit galls.

+New York - local; Lewis County, June 21. (Welch).

***Sclerotinia seaveri* Rehm.

*South Carolina - Clemson College, April 18; collected by C. A. Ludwig; determined by G. Hamilton Martin and R. J. Haskell.

*Missouri - Jefferson City, April 17; collected by A. C. Burrill; determined G. Hamilton Martin and R. J. Haskell.

QUERCUS ALBA, white oak.

Strumella coryneoides Sacc. & Wint., canker.

+Virginia - severe locally; Salem, October 10. (Fromme).

QUERCUS SPP., oak.

Armillaria mellea (Vahl) Quel., root rot.

+Minnesota - on *Q. alba*, *Q. coccinea*, *Q. macrocarpa*, and *Q. rubra*; especially prevalent on *Q. rubra*; White Bear, June 2. (Sect. Pl. Path.).

+*Bulgaria inquinans* Fr.

Connecticut - on *Q. alba*; some doubt as to whether this fungus is parasitic; Portland, August 25. (Stoddard).

Bulgaria polymorpha (Oed.) Wettst.

New York - frequently found on Long Island; apparently parasitic but may need special conditions, as a final agent, at least, it works rapidly killing bark and cambium tissues; Oyster Bay, July 10. (Rankin).

Gnomonia veneta (Sacc. & Speg.) Kleb., anthracnose.

Reported from Massachusetts, Connecticut, New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Wisconsin, Iowa, +Kansas. Especially severe on *Q. alba*.

Physalospora malorum (Pk.) Shear, twig blight.

Minnesota - on +*Q. alba*, *Q. coccinea*, *Q. macrocarpa*, and *Q. rubra*; first report from any state for *Q. coccinea* and *Q. rubra*; St. Paul, July 12. (Sect. Pl. Path.).

Taphrina coerulescens (Mont. & Desm.) Tul., leaf blister.

Reported from Connecticut, New Jersey, Pennsylvania, South Carolina, Georgia, Florida, Mississippi, Louisiana, +Texas, Indiana, Iowa.

RHUS CANADENSIS, fragrant sumac.

+*Sphaerotheca humuli* (DC.) Burr., powdery mildew.

Connecticut - Hamden, August 28. (Bender).

SALIX SPP., willow.

Bacterium tumefaciens EFS. & Town., crown gall.

Connecticut - on *S. babylonica* and *S. nigra*, first report from any state for these two hosts. (Bender).

+*Fusicladium saliciperduum* (Alb. & Tub.) Lind., scab.

Maine - Mt. Desert, July 15. (Brown).

Connecticut - a serious trouble on willows in northern part of state; ornamental trees 2-3 feet in diameter showed diseased condition early in June at which time the foliage was largely killed and resembled the anthracnose troubles of sycamores and oaks during

spring season; I found this same trouble in several localities in Nova Scotia and New Brunswick. (Clinton).

Trametes suaveolens Fr., white wood rot.

+Connecticut - Litchfield County, June 24. (Clinton).

SCHINUS MOLLE, California pepper tree.

+*Caecoma radiculicola* (Greef) Cobb.

Texas - Dimmit County. (Taubenhaus).

SORBUS AMERICANA SITCHENSIS, western mountain ash.

+*Gymnosporangium nootkatensis* (Trel.) Arth., rust.

Oregon - altitude 4,000 feet; Clackamas County, August 21. (Boyce).

SORBUS AMERICANA, American mountain ash.

***Alternaria* sp., leaf spot.

Iowa - Shenandoah, September, 1926. (Archer).

SORBUS QUERCIFOLIA, oakleaf mountain ash.

***Cytospora* sp.

Montana - Bozeman, April 8, 1926. (Young).

SORBUS SP., mountain ash.

***Eutypella sorbi* (Schm. & Kze.) Sacc.

Montana - Bozeman, September 6, 1925; collected by P. A. Young; determined by W. W. Diehl.

Nummularia discreta (Schw.) Tul., blister canker.

+Iowa - found in two localities; at Osage the disease occurs on old trees planted on an avenue; a number were dead and many have a severe infection; September 30. (Archer).

ULMUS PUMILA, dwarf Asiatic elm.

+*Gloeosporium* sp., anthracnose.

Texas - (Taubenhaus).

Ozonium omnivorum Shear, root rot.

Texas - a very susceptible host; 80 per cent loss. (Taubenhaus).

Baker (6) states that, though the host is said to be resistant to diseases in general, it is susceptible to this disease and that serious losses were experienced in Wichita Falls, Waco, and other places in northern and central part of state.

ULMUS SPP., elms.

Gnomoria ulmea (Sacc.) Thuem., black spot.

Reported from Connecticut, New Jersey, +Virginia, *South Carolina, *Ohio, Texas, Wisconsin, *Missouri, Kansas.

D I S E A S E S O F O R N A M E N T A L S

ABELIA GRANDIFLORA, glossy abelia

+*Ozonium omnivorum* Shear, root-rot.

Texas - severe on both nursery and home plantings (Bach).

ALTHAEA ROSEA, hollyhock.

Cercospora althaeina Sacc., leaf-spot.

+*Ohio - Columbus, Franklin County, August 12. (Mendenhall).

Indiana - rather prevalent in Lafayette; some plants apparently resistant. October (Mains).

*Nebraska - Freemont, October 1926. Collected by R. Johnston. Determined by G. Hamilton Martin).

*Kansas - Manhattan, November 1926. Collected by D. V. Layton. Determined by G. Hamilton Martin.

Puccinia hibisciata (Schw.) Kell., rust.

+New Jersey - very severe infection on small planting; Cedarville, Cumberland County, April 22. (White).

P. r.: Kansas, Nebraska, North Dakota.

Puccinia malvacearum C. G. Bertero, rust.

Reported from Maine (a source of more complaint than any other disease of minor crop, Folsom). New Hampshire, Massachusetts, Connecticut, (more than average year, Stoddard and Bender) New York, Delaware, New Jersey, Pennsylvania, Maryland, Virginia, North Carolina, Ohio, Indiana, Michigan, Wisconsin (a start of an epidemic checked by advent of drought). Minnesota, +South Dakota, (first report), +Nebraska (first report), Colorado, New Mexico, Utah, Idaho, Washington, and Oregon.

AMPELOPSIS SPP., Virginia creeper, Boston ivy.

Guignardia bidwellii (Ell.) Viala and Rav., black-rot.

Reported on *A. quinquefolia* from New York and New Jersey.

Report on *A. tricuspidata* from Connecticut, Rhode Island, New Jersey, and +Delaware.

Sphaeropsis ampelopsidis Daniels.

Illinois - (Tehon and Daniels, 50:123).

ANEMONE CORONARIA, poppy anemone.

+**Aphelenchus agricola* de Man., nematode.

California - San Jose, Dec. (Cobb).

+**Cephalobus elongatus* de Man., nematode.

California - San Jose, Dec. (Cobb).

ANEMONE SP.

+*Botrytis* sp., crownrot.

New Jersey - very severe, killing plants in large spots; Rahway, Union County, December 28. (White).

ANTIRRHINUM MAJUS, snapdragon.

Colletotrichum antirrhini F. C. Stewart, anthracnose.

New Jersey - Belvidere, Warren County, August 29. (White).

Ohio - Crop almost an entire loss in one large commercial greenhouse; September 15. (May).

Phyllosticta antirrhini Syd., leafspot, stem canker.

+*Maine - Orono, Penobscot County, October. (Folsom).

New Jersey - local; no leaf spotting but a high percentage of stem cankers at soil level caused death of entire plant; New Brunswick, October 29. (White).

Pennsylvania - Breinigsville, January 6. (Weiss).

Puccinia antirrhini Diet. and Holw., rust.

Reported from Connecticut, New Jersey, Delaware, Texas, Ohio, Indiana (dusting with sulphur almost completely eliminated the trouble. (Mains). Minnesota, Nebraska, Kansas (more prevalent; practically destroyed plantings long before they should have ceased blooming. (Elmer). Colorado (common; caused considerable damage. (LeClerc) Utah (said to be difficult to control in greenhouse culture where plants are started from cuttings but seldom present where only seedling snapdragons are grown; yet in one home garden at Logan, seedlings were found thoroughly infested and plants weakened to less than half their full vigor. (Linford)), Washington.

Mains and Thompson (29) have studied the conditions influencing spore germination, and they report successful control with sulfur dust. Several strains showing resistance have been developed.

Sclerotium rolfsii Sacc., crown rot.

+Texas - Lee County. (Taubenhaus).

P. r.: Mississippi.

AQUILEGIA SP., columbine.

Erysiphe polygoni DC., powdery mildew.

+Colorado - very common; appeared too late in season to do any appreciable damage. (LeClerc).

ASPARAGUS PLUMOSUS, asparagus fern.

+**Ascochyta asparagina* Petrak, blight. New York (Weiss).

ASPIDISTRIS SP.

+*Labrella aspidistrae* Tehon and Daniels.

Illinois (Tehon and Daniels, 50:126).

BAUHINIA TOMENTOSA, St. Thomas-tree.

+*Ozonium omnivorum* Shear, root-rot.

Texas - Hidalgo County. (Bach).

BEGONIA SP., begonia.

Aphelenchus olesistus Ritzema Bos, nematode leaf-spot.

New York - several reports. (Massey).

P. r.: New York and Pennsylvania.

Botrytis sp., cinerea type, blight.

New Jersey - Newark, August 13. (White).

P. r.: Illinois, Indiana, New York.

Caecoma radiculicola (Greef) Cobb, root-knot.

+Texas - unimportant out doors, very important under greenhouse conditions; 2 per cent loss. (Taubenhaus).

P. r.: California, Indiana, Nebraska, Ohio.

BERBERIS THUNBERGI, Japanese barberry.

Leaf-spot, apparently bacterial.

+*Ohio - Put-in-Bay, August 18. (Haskell).

Wisconsin - Madison, June 25. (Vaughan).

+*Kansas - Kansas City, October 1926. Collected by D. V. Layton; det. by G. Hamilton Martin.

P. r.: Minnesota, New York, Michigan and Wisconsin.

BERBERIS SPP., barberry.

Leaf-spot, apparently bacterial.

+*Arkansas - Springdale, Washington County, June 7. (Young).

P. r.: Idaho, Michigan, Minnesota, Nebraska, *New York, North Dakota, *Ohio, *Pennsylvania, *Washington, Wisconsin.

BUDDLEIA SP., butterflybush.

Caconema radiculicola (Greef) Cobb, root-knot.

+Texas - trace. (Pessin).

P. r.: Mississippi.

BUXUS SEMPERVIRENS, box.

Macrophoma candollei (Berk. & Br.) Berl. and Vogl., leaf-blight.

New York - Long Island, November 7. (Hollister).

New Jersey - severe; general; New Brunswick, May 12. (White).

+*West Virginia - Charleston, June 25. (Martin).

*Mississippi - Ridgeland, February 5. (Wedgworth).

Nectria rousselliana Tul., canker.

*New York - Long Island, August 1. (Martin).

+*West Virginia - Charleston, June 25. (Martin).

P. r.: Maryland, New Jersey, *New York, *North Carolina, *Pennsylvania.

Phoma sp.

+*Mississippi - Ridgeland, February 5. (Martin and Wedgworth).

P. r.: *District of Columbia.

Frost injury.

Pennsylvania - (McCubbin).

CALENDULA OFFICINALIS, calendula.

+Sclerotium rolfsii Sacc., stem-rot.

Texas - Prevalent sandy soils; 2 per cent loss; Lee County. (Taubenhaus).

Mosaic - undetermined.

Connecticut - one report of infection in greenhouse containing other mosaic plants; host new to state; New Haven, August 7. (Clinton).

P. r.: Iowa, Minnesota.

CALLISTEPHUS CHINENSIS, China-aster.

Coleosporium solidaginis (Schw.) Thuem., rust.

*Virginia - third in importance of diseases of this host in Mathews County aster section; August. (McWhorter).

+South Carolina - less prevalent. (Ludwig).

Indiana - damage largely due to defoliation and unsightly appearance; Yellow Comet very resistant. (Mains).

+Iowa - severe local infection; Ames, September 14. (Archer).

+Nebraska - first time observed by me in state. (Peltier).

Erysiphe cichoracearum DC., powdery mildew.

+*Vermont - Charlotte, August 15. (Weiss and Bruman).

Fusarium conglutinans callistephi Beach, wilt.

+Massachusetts - general; more prevalent; 10 per cent loss; Maximum loss in early part of season. (Davis).

New York - Steuben County, July 28. (Chupp).

+Pennsylvania - about 70 per cent loss on one large commercial planting. (Thurston).

+Delaware - very heavy infection was generally observed, especially with late plantings. No practical control measures have been worked out. The solution of this problem is in the development of wilt resistant varieties as developed for the wilt or yellows of cabbage. (Adams, 40).

Virginia - traces in two fields examined; new land on which asters had never been grown; possible introduction with seed; North, June 29. (McWhorter and Haskell).

Michigan - general; more prevalent; more important than yellows in 1927; all varieties observed susceptible; maximum injury in midseason. (Nelson).

+Wisconsin - present in many gardens; more prevalent; some varietal susceptibility observed; resistant selections give promise; Madison, June 15. (Vaughan).

Minnesota - general; average prevalence; St. Paul, July 14. (Sect. Pl. Path.).

North Dakota - average prevalence. (Brentzel).

+Utah - wilt is driving commercial aster growers out of business and seriously damaging home garden plantings in several localities; found in Iron, Beaver, Utah, Salt Lake and Davis Counties; Cedar City, August 24. (Linford).

P. r.: *Connecticut, *Georgia, Idaho, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, New Hampshire, *New Jersey, *New York, North Dakota, Ohio, Oregon, Vermont, *Virginia, Washington, West Virginia. See Bibl. Jackson (20) and Jones (22).

Yellows, virus.

New Jersey - general; New Brunswick, August 29. (White).

Pennsylvania - quite common; usually very bad where found. (Thurston).

Delaware: - One of the most troublesome diseases of the China aster which discourages many from propagating this attractive flower. The destruction of all weeds which show the disease near plantings will assist in checking the prevalence of the leaf hoppers. Keeping young plants protected from insects during early stages of growth along with frequent applications of nicotine dust as the plants mature should assist in reducing possibilities of infestation. Solid plantings have been observed to be more seriously infested than if interplanted with other flowers. Propagation under glass as long as possible has advantages in order to reduce the exposure to outside conditions. (Adams 1).

Virginia - three commercial fields (one to two acres in size) showed a trace, 2 per cent, and 5 per cent of plants affected with yellows; plants just

beginning to bloom; some plants showed the extreme type (dwarfing) while others showed only parts of otherwise normal plants affected. June 29. (McWhorter and Haskell).

Indiana - Lafayette. (Kohl).

Wisconsin - observed in many gardens in Dane, Milwaukee, Winnebago and Washington Counties; probably widely distributed. (Vaughan).

Minnesota - general; St. Paul, August 5. (Sec. Pl. Path.).

+Nebraska - found in occasional plantings. (Peltier).

+Colorado - has become quite a serious disease with the growers. (Le Clerg).

+Utah - observed presumably for the first time in this state at Murray, September 9. Since then, was seen in several localities in Salt Lake and Davis Counties; 3 per cent heaviest infection noted. (Linford). See Bibl. Kunkel (24), (25); McCallan (31), Ogilvie (38), Weinard (9).

CAMELLIA JAPONICA, common Camellia.

Pestalozzia guepini Desm.

+New Jersey - found on large grey leaf spots and dead twigs; inoculations unsuccessful; local; Rahway, Union County, August 26. (White).

P. r.: Alabama, *Louisiana, *Mississippi, *New York and *Pennsylvania.

CAMPANULA AMERICANA, tall bellflower.

Fusarium sp.

+New Jersey - a *Fusarium* sp. associated with an undetermined root-rot was isolated from the roots and browned bundles; plants are wilted; lower leaves dead; Caldwell, July 7. (White).

CAMPANULA MEDIUM, Canterbury bells.

+*Sclerotinia* sp., stem-rot.

Washington - Milton. (Dept. Pl. Path.).

CANNA SP., canna.

Budrot, undetermined.

Delaware - common in a commercial planting, probably caused by bacteria; disinfection of roots is being tried to check it. (Adams 1).

CENTAUREA MONTANA, mountain bluet.

+*Sclerotium* sp.

Indiana - Vincennes, August 5. (Weiss).

CHRYSANTHEMUM SPP., Chrysanthemum

Botrytis cinerea Auct., blossom rot.

+Washington - single report from greenhouse; Walla Walla, December 5. (Dept. Pl. Path.).

See Bibl. Pape (40).

Caenoma radicum (Greef) Cobb, root-knot.

Washington - Tacoma. (Dept. Pl. Path.).

Cylindrosporium chrysanthemi Ell. and Dearn., leaf-spot.

Connecticut - on greenhouse plants; two reports; Storrs, November 4.
(Clinton).

+*New York - Larchmont, August 23. (Weiss).

Cuscuta sp., dodder.

+Washington - single report from greenhouse; Spokane, July 23. (Dept.
Pl. Path.)

Erysiphe cichoracearum DC., powdery mildew.

Connecticut - in greenhouse; Redding Ridge, November 7. (Clinton).

New York - reported from several greenhouses on commercial crop.
(Massey).

New Jersey - Clinton, Hunter County, July 3. (White).

Delaware - late season favorable for mildew; no serious disturbance
experienced. (Adams 1).

+Mississippi - September 6. (Neal).

Fumago vagans Pers., sooty mold.

New Jersey - New Brunswick, October 5. (White).

Septoria chrysanthemella Cav., leaf-spot.

New Jersey - New Brunswick; June 22. (White).

Virginia - frequent Bordeaux dusting has been found necessary to pre-
vent defoliation; a marked varietal susceptibility was shown.
(McWhorter).

Texas - trace, unimportant. (Taubenhaus).

Verticillium albo-atrum Reinke and Berth., wilt.

New Jersey - two reports Hunterdon and Middlesex Counties isolated and
determined in both cases; Clinton, September 12. (White).

CLEMATIS SPP., clematis, virgins-bower.

Cercospora squalidula Pk., leaf-spot.

+*Utah - on *C. ligusticifolia*; Duchesne, August 11. (Linford).

Didymaria clematidis Cke. and Hark.

+*Utah - on *C. ligusticifolia*; Duchesne, August 11. (Linford).

P. r.: *California, *Colorado, *Montana.

Erysiphe polygoni DC., powdery mildew.

Washington - single report from Seattle. (Dept. Pl. Path.).

+*Leptosphaeria agminalis* Sacc. and Morth.

Oregon - Ashland, September 1925. (Zeller 57: 134):

Puccinia clematidis (DC.) Lagh., rust.

Washington - Walla Walla, July 11. (Dept. Pl. Path.):

CONVALLARIA MAJALIS, lily-of-the-valley:

+Bacterial leaf-spot.

New Jersey - North Branch, August 2. (White).

CORDYLINE TERMINALIS, common dracena.

+*Corticium vagum* Berk. and Curt., root-rot.

Indiana - (Rutherford, June 15.) (White).

COSMOS SP., cosmos.

Phomopsis stewartii Pk., stem-canker.

+Iowa - found in two gardens. (Archer).

+Kansas - Linn County, October. (Elmer).

P. r.: Michigan, New York, Ohio, *South Dakota.

+*Sclerotium rolfsii*, Sacc., stem-rot.

Mississippi - Canton, May 18. (Wedgworth).

CROCUS SP., crocus.

Fusarium spp., dry rot of bulb.

+Washington - Seattle, October 28. (Dept. Pl. Path.).

P. r.: *Pennsylvania.

CYCLAMEN SP., cyclamen.

Caconema radicum (Greef) Cobb, root-knot.

+New Jersey - general; damage slight; no severe cases observed;

Bridgeton, August 19. (White).

P. r.: Indiana, Nebraska, *Ohio, West Virginia.

Glomerella cingulata (Stonem.) Spauld. and Schrenk, anthracnose.

+New Jersey - found at Bound Brook, Bridgeton and Clinton, September 13. (White).

P. r.: Massachusetts, *Virginia.

Stem rot - undetermined.

New Jersey - found in all cyclamen collections observed; *Botrytis*

cinerea (?) was present on all plants affected; sporulating

abundantly. Inoculations negative. Bacteria associated in all cases and are probably primary. (White).

DAHLIA SP., dahlia.

Bacterium solanacearum EFS., tuber-rot.

+Delaware - very heavy infection; careful selection and disinfection as for potatoes should prove effective.

Georgetown, August 1. (Adams).

+*Botrytis cinerea* Auct.

Rhode Island - abundant on necrotic areas, which occurred where fallen petals adhered; Newport, September 2. (Bruman). Determined by F. Weiss.

Caconema radicum (Greef) Cobb, root-knot.

+*Georgia - Thomasville, October 24. (Boyd).

+Missouri - a 100 per cent infection in a planting in Dunklin County; southeastern section of state has considerable root-knot; no blossoms were formed on the infected plants examined; Kennett, October. (Scott).

P. r.: California, Mississippi.

Erysiphe spp., powdery mildew.

E. cichoracearum DC., reported from +Indiana and *New Mexico.

E. polygoni reported from New Jersey and Iowa.

Yellows, mosaic.

Connecticut - noted in several places. (Stoddard).

New Jersey - on all of Geisha variety that came from one root in

1926; also on La Favorita, spread by leaf hoppers from a single plant to all in vicinity in one garden where leaf hoppers were bad; July 9. (White).

+Indiana - Owen County, November 2. (Gardner).

Wisconsin - Janesville (August 20) and Madison. (Vaughan).

See Bibl. Goldstein (17).

Stunt, dwarf, rosette.

+New York - common in state; a 90 per cent infection in a field of about one-half acre. (Massey).

Delaware - many plantings showed this symptom early in season but as weather conditions became more favorable for growth, affected plants outgrew the symptoms. (Adams 1).

Maryland - much less than in the New England States. (Norton).

+Kansas - reported once; symptoms include dwarfed leaves, shortened internodes and abnormal number of stalks, giving a dwarfed and a rosette-like appearance, no abnormal internal discolorations of stems or roots, similar in appearance to disease noticed on dahlias in Iowa in 1926. (Elmer).

See Bibl. Goldstein (17), Weiss (52).

DELPHINIUM SP., larkspur.

Bacterium delphinii (EFS.) Bryan, black-spot.

*Maine - Thomaston; June 15. (Folsom).

*Massachusetts - Tyngham, June 2. (Weiss).

Connecticut - New Haven, June 11. (Clinton and Bender).

New York - very common and destructive in all parts of the state; Tompkins County, July 1. (Chupp).

Delaware - very prevalent with early growth; May 9. (Adams).

+West Virginia - Salem, Harrison County, June 22. (Martin and Craig).

+Indiana - Lafayette. (Kohl).

+Iowa - reported for first time in the state at Des Moines on some English hybrids, nearby American varieties were slightly affected, June 11. (Archer).

P. r.: Connecticut, Delaware, Illinois, Maine, *Massachusetts, Michigan, New Hampshire, *New York, Oregon, Pennsylvania.

Corticium vagum Berk. and Curt., stem rot.

New Jersey - Woodbury, April 4. (White).

+Washington - Puyallup. (Dept. Pl. Path.).

P. r.: *Arizona, *Maine, New Jersey, New York.

Erysiphe polygoni DC., powdery mildew.

Minnesota - Duluth, July 29. (Sect. Pl. Path.).

+Utah - Logan (Linford).

P. r.: Connecticut, Delaware, Indiana, Maine, Minnesota, *Nebraska, *New York, *Pennsylvania, Washington, Wisconsin.

Sclerotium spp., root and crown-rot.

Massachusetts - September 14. (Weiss).

Connecticut - Clinton, July 29. (Clinton).

New York - numerous reports. (Chupp).

New Jersey - most severe infection in nurseries where losses

reached 10 and 12 per cent; Essex Fells. June 17. (White).

+Virginia - Norfolk, May. (McWhorter).

Kentucky - Lexington, June 15. (Valleau).

Mississippi - general; Starkville, April 21. (Wedgworth).

Texas - Lee County. (Taubenhaus).

See Bibl. Takahashi (49).

Ring spot.

Kentucky - nearly all plants at a local nursery were affected; closely resembles ring spot of tobacco. (Valleau).

Yellows.

Utah - in a garden at Logan: 50 per cent infection on tall perennial varieties; some of the plants became chlorotic in advance of blossoming; leafy proliferation of floral parts was the characteristic feature, all degrees of transformation present from slightly greenish flowers to expansive leafy structures which were recognized as floral organs only by their arrangement on the axis, on some plants the severity of injury varied widely from spike to spike. (Linford).

DENDROBIUM THYRSIFLORUM, Orchid.

+*Botrytis cinerea Auct.

Massachusetts - Marblehead, August 18. (Weiss and Bruman).

DIANTHUS SPP., pink

+Volutella dianthi (Hals.) Atk., anthracnose.

Indiana - on D. Allwoodii and D. caesius; killed several plants; Lafayette. (Mains).

DIANTHUS CARYOPHYLLUS, carnation.

Alternaria dianthi Stevens and Hall., leaf-spot and blight.

+*Massachusetts - Guba (19) reports that it was the cause of much damage and loss to carnation growers in the vicinity of Boston during the past year.

Bacterium woodsii EFS., bacterial spot.

+*Ohio - serious in greenhouses; Cincinnati, December 14. (Wilson).

Corticium vagum Berk. and Curt., stem-rot.

+Mississippi - general; more prevalent; Grenada, September 6. (Neal).

Texas - Bell County. (Taubenhaus).

Fusarium sp., wilt.

*Massachusetts - about a 1 per cent loss in a greenhouse. (Davis).

+New Jersey - 10 per cent loss in a local planting; found only in Mercer County; Miss Theo most susceptible variety; Trenton, September 27. (White).

Pennsylvania - in greenhouse at State College. (Thurston).

Delaware - very common. (Adams).

Iowa - occasional. (Archer).

Missouri - caused considerable damage in the planting of a florist in Pettis County. (Scott).

+Washington - Spokane and Walla Walla. (Dept. Pl. Path.).

See Bibl. Ludwigs (28) and Preti (43).

Sporotrichum poae Pk., bud-rot.

New Jersey - Montclair, June 25. (White).

*Virginia - Richmond, December 7. (Weiss).

Uromyces caryophyllinus (Schrank) Wint., rust.

DIGITALIS PURPUREA, foxglove.

+Sclerotium sp., root-rot.

*Indiana - Vincennes, August 6. (Weiss).

EUONYMUS SPP., burningbush, wahoo.

Colletotrichum griseum Heald and Wolf, anthracnose.

+*Mississippi - on *E. japonicus*; Meridian, January 21. (Martin and Neal).
P. r.: *Louisiana and *Mississippi.

Gloeosporium sp., anthracnose.

Texas - prevalent, reported from five counties. (Taubenhaus).

P. r.: Louisiana, Mississippi and Texas.

FICUS ELASTICA, India rubber tree.

Glomerella cingulata (Ston.) Spauld. and Schrenk, anthracnose.

+New Jersey - Rutherford, October 3. (White).

P. r.: *District of Columbia, New York.

FORSYTHIA SP., forsythia, goldenbell.

Caconema radicicola (Greef) Cobb, root-knot.

Mississippi - West Point, February 25. (Wedgworth).

+*Pestalozzia* sp., leaf-spot.

New Jersey - on *F. viridissima* (greenstem forsythia), Beverly, September 2. (White).

FREESIA REFRACTA ALBA, common freesia.

Fusarium sp., bulb-rot.

+Washington - Spokane, November 28. (Dept. Pl. Path.).

P. r.: *Pennsylvania.

GALAX APHYLLA, galax.

Dimerosporium galactis Ell. and Ev.

South Carolina - (Stevenson and Wilson).

GARDENIA FLORIDA, Cape-jasmine.

Caconema radicicola (Greef) Cobb, root-knot.

+*Florida - Wauchula, August (Steiner and Gilbert).

+Mississippi - Greenwood, February 22. (Neal).

P. r.: *New York, Texas.

+*Phyllosticta* sp., leaf-spot.

*Mississippi - Yazoo City, April 11. (Wedgworth). Determination made by N. O. Howard.

Bacterial bud rot.

California - Wilson (55) states that one of the greatest trials of nurserymen who grow gardenias in quantity is the falling off of buds shortly before flowering time. In the San Francisco Bay region, bud drop caused a \$2,000 loss in one nursery during 1925. Temperature has a direct influence on the activity of the bacteria, higher temperatures being more favorable. The organism belongs to the group *Erwinia* and is spread by mealy bugs and ants.

GLADIOLUS SP., gladiolus.

Bacterium gunnisonianum McC., bacterial blight.

Indiana - Lafayette, November 3. (Gardner).

P. r.: Indiana, Michigan, *Minnesota, North Dakota.

Bacterium marginatum McC., stem-rot, scab.

+*Vermont - on var. Pfitzers' Triumph; Burlington, August 15. (Weiss and Bruman).

+*Massachusetts - Longmeadow; July 27. (McCulloch and Bruman).

New York - increasing in severity; general. (Massey).

- Delaware - very common with many outside plantings; carried over with corms and bulblets. (Adams 1).
- Indiana - found in ten counties. (Dietz). Noted on varieties. (Mrs. Frank Pendleton). Crimson Glow, America (Mains).
- Wisconsin - apparent all summer; general; less than average; Madison, June 15. (Vaughan).
- Washington - (Dept. Pl. Path.).
- California - appears quite abundantly in several sections of state; affects leaves and flower stalks as well as bulbs; some varieties are injured beyond flower production in the field, others to the extent that the flower stalks rot on arrival at the flower markets. (California Dept. of Agr. 10).
- See Bibl. Nelson (37), Scott (45:554), Starrett (48).
- Wisconsin State Department of Agriculture (56).

Fusarium spp., rot.

- +Mississippi - Lyman, May 28. (Wedgworth).

California - (Scott, 45: 556).

Fusarium oxysporum gladioli Massey, rot.

- +*Connecticut - Bridgeport, March 22. (Brierly).

+New York - scattered; (Massey).

New Jersey - on Flora and Anna Berrius varieties only in collection of over 60 varieties; Mutchen, December 27. (White).

Wisconsin - average prevalence, (Vaughan).

Penicillium gladioli McCul. and Thom, corm rot.

Indiana, Minnesota and Iowa. (Elmer 14).

New York, Kansas and New Mexico. (McCulloch and Thom 32 and 33).

+New Jersey. (White).

Sclerotium sp., dry-rot.

New York - General. (Massey).

Indiana - found in seven counties. (Dietz).

Wisconsin - (Wisconsin State Department of Agriculture 56).

Septoria gladioli Pass., hard-rot, leaf-spot.

- +Connecticut - one complaint of serious injury to bulbs which produced poor plants later; Devon, January 22. (Clinton).

New York - General. (Massey).

New Jersey - general; very severe infection on corms noted on many varieties in storage; Madison, April 27. (White).

Delaware - considerably on the increase but not recognized usually until corms are ready to plant. A slight infection develops very rapidly after planting, causing complete collapse of all growth. Control is accomplished by soaking the corms two or three hours in a standard solution of the organic mercury compounds sold under trade names. Much of the loss occurs during storage period. After harvest and when corms are dry, the treatment may be made before placing them in storage. This should materially reduce storage losses. (Adams 1).

- *Ohio - Lakewood; February 16. (Weiss).

Indiana - Elkhart and Huntington Counties. (Dietz).

Wisconsin - present but not important. (Vaughan).

See Bibl. Wisc. State Dept. Agric. (56).

- +*North Dakota - Fargo, October 1. (Brentzel and Weiss).

Washington - Seattle, January 7. (Dept. Pl. Path.).

See Bibl. - Anon. (2), Gloyer (16), and Scott (45).

Recent literature - see Bibl. Beal (7), Clark (11), Delkin (12), Drayton (13), Massey (30), McLean (35), Nelson (37), Schenk (44).

HEDERA HELIX, English ivy.

+Pestalozzia sp., leaf-spot.

New Jersey - Newark, August 13. (White).

HELICHRYSUM BRACTEATUM, strawflower.

+Yellows, undetermined.

New Jersey - New Brunswick, August 13. (White).

HEMEROCALLIS SP., day-lily.

+Sclerotium sp., root-rot.

Indiana - Vincennes, August 6. (Weiss).

HUMULUS SP., ornamental hop.

Sphaerotheca humuli (DC.) Burr., powdery mildew.

+Connecticut - New Haven, July 20. (Clinton).

HYDRANGEA SP., hydrangea

Botrytis cinerea type, blight.

+*West Virginia - Charleston, June 25. (Martin and Craig).

+*Missouri - more prevalent than in 1926; Jefferson City, June 3. (Burrell). Determination by G. Hamilton Martin.

Cercospora hydrangeana Tharp, leaf-spot.

+Virginia - appears to be the only economic disease of this host in Tidewater section of State. (McWhorter).

P. r.: Alabama, *Mississippi, *Texas.

Oidium sp., powdery mildew.

Pennsylvania - some damage under glass in Washington County. (Thurston).

+*Virginia - many of the first year potted plants at a local nursery were rendered unsightly by an abundance of powdery mildew; varieties Splendens and Marshall Foch were particularly susceptible, variety De Viscage was most resistant; Hampton, October 11. (McWhorter).

+*Utah - found at a local florist, who has propagated own stock for years has noticed this disease for about 15 years but has experienced no serious result from it; Farmington, September 12. (Linford).

P. r.: Florida (1923). New Jersey (1924).

Pape (41) in a recent article notes the recent appearance in Germany of Oidium hortensii and states that it is severe at times and seems to be spreading. He further says that the first mention of the occurrence of mildew on this host was in 1925 in Holland on plants from France, later also on some from Germany. Reported from Denmark in 1926 on plants from Holland and also it had been observed in Norway on plants from Holland. He gives the following observation as to varietal susceptibility. "Varieties severely attacked; Eclairer, Elmar, Loreley. Moderately susceptible: America, Blauer, Prinz, Freya, Friedr. Matthes, Giselher, Gudrun, Heiderösel, Helge, Lancelot, Madame Mouillere, Marne, Marshall Foch, Matador, Mein Ideal, Odin, Parsifal, Peer Gynt, Professor Bois, Schone Perle, Viking. None observed on Gertrud Glahn,

Goliath, Niedersachsen, "Schöne Dresdnerin."

Phyllosticta sp., leaf-spot.

+*Virginia - Hampton, October 11. (McWhorter).

HYPERICUM ADPRESSUM, creeping. St. Johnswort.

+*Cercospora hyperici* Tehon and Daniels, leaf-spot.

Illinois - Bremet, Pratt County, July 6. (Tehon and Daniels, 50:127).

IBERIS PECTINATA, candytuft.

+*Rhizoctonia* sp.,

Arizona - caused a girdling of stems; Alhambra.

Arizona News Letter (4).

ILEX OPACA, American holly.

+*Sphaeropsis* sp., leaf-spot.

New Jersey - caused severe defoliation in one instance.

Moorestown, March 16. (White).

ILEX VERTICILLATA, common winterberry.

+*Rhytisma ilicis-canadensis*, tar-spot.

New York (Fitzpatrick 15:60).

IRIS SPP., Iris.

Bacillus carotovorus L. R. Jones, soft-rot.

New York - New York City - May 1. (Martin).

New Jersey - Caldwell (July 7); Somerville and Vineland; follows borer work. (White).

+West Virginia - Charleston, June 25. (Martin and Craig).

Ohio - scattered. *I. germanica* very susceptible. (May).

Indiana - found in seven counties scattered over state; much more prevalent; frequent rains in early season were favorable to the disease. (Dietz and Jackson). Noted on varieties Queen Caterina and Quaker Lady. (Mains).

Michigan - dry season unfavorable to disease; less prevalent. (Nelson).

+Washington - Liberty Lake, June 13. (Dept. Pl. Path.).

Botrytis sp., root-rot.

+Wisconsin - northern and central sections; Madison, September 1. (Vaughan)

Didymellina iridis (Desm.) Hoehn., leaf-spot.

Reported from *Maine, Connecticut, *New York, +New Jersey, Pennsylvania, Delaware, Maryland, Virginia, (Japanese iris not affected), *West Virginia, Indiana, Michigan, Minnesota, Iowa, *South Dakota, Oregon, *California.

Macrosporium sp., leaf-spot.

Kansas - general in vicinity of Manhattan. (Elmer).

+*Sclerotium delphinii* Welch, stem-rot.

*Connecticut - a new host to state; Clinton, August 2. (Clinton).

Indiana - second most serious disease of host in state; conspicuous at digging time; causes loss to commercial growers: serious in June and July at Indianapolis killing foliage on var. Dream, Madam Cheri and Mother of Pearl. (Jackson and Dietz). Noted on *Pallida dalmatica*. (Mains).

KALMIA LATIFOLIA, mountain laurel.

Phomopsis kalmiae Enlows, leaf-blight.

+New Jersey - local; also found on twigs; Bound Brook, May 27. (White).

P. r.: *District of Columbia, *Virginia.

Phyllosticta latifolia Ell. and Ev., leaf-spot.

New Jersey - general; Bridgeton, June 2. (White).

P. r.: *Delaware, Mississippi and New Jersey.

LABURNUM VOSSI

Fusarium salicis Fr.

Ohio - Tippecanoe City, June 20. Collected by J. M. R. Adams.

Determined by C. D. Sherbakoff.

LAGERSTROEMIA INDICA, common crapemyrtle.

Uncinula australiana McAlp. oidial stage, powdery mildew.

Reported from South Carolina, +Mississippi, +Louisiana, Texas.

+Ozonium omnivorum Shear, root-rot.

Texas - Travis County. (Baeh).

LATHYRUS ODORATUS, sweetpea.

+Aphanomyces euteiches Drechs., root-rot.

Michigan - Linford (27) states that several varieties were seen at McMillan in 1926 much weakened by the attack of this fungus.

Bacterium tumefaciens EFS. and Town., fasciation.

Reported by Brown (9) for +New York, New Jersey, +Maryland, and +Virginia by Dietz for +Indiana.

Erysiphe polygoni DC., powdery mildew.

Connecticut (Stoddard), +Colorado - very abundant (LeClerc), Washington (Dept. Pl. Path.).

Fusarium sp., root-rot, wilt.

New York - general over state; Wayne County, July 4. (Chupp).

+Mississippi - severe locally; Bay Springs, April 16. (Wedgworth).

Microsphaera alni (Wallr.) Wint., powdery mildew.

New Jersey - general; Bound Brook, May 27. (White).

+New Mexico - causing considerable damage to sweet peas grown for seed; July 1. (Crawford).

+Washington - Seattle. (Dept. Pl. Path.).

Pythium sp., root-rot.

+*Maryland - Catonsville, December 15. (Weiss).

P. r.: Connecticut, New Jersey.

Thielavia basicola (Berk and Br.) Zopf., black root-rot.

Connecticut - severe local infection; Morris December 14. (Clinton).

New Jersey - local; Clinton, January 7. (White).

+Indiana - Floyd County, November 21. (Gregory and Gardner).

Mosaic, virus.

Reported from *New York, +New Jersey, *Virginia and *Kansas.

See Bibl. Weinard (51).

LAUROCERASUS OFFICINALIS, English cherry-laurel.

+Shot-hole, undetermined.

South Carolina - Greenville, July 14. (Ludwig).

Mississippi - Jackson, June 29. (Wedgworth).

LEDUM GROENLANDICUM, true Labrador-tea.

Melampsoropsis abietina (Alb. and Schw.) Arth.,

+*Minnesota - Askov, August 20. (Dept. Pl. Path.).

P. r.: New Hampshire, Wisconsin.

MARSILEA SP., pepperwort.

+*Botrytis sp., blight.

Illinois - Evanston, March 31. Collected by A. H. Povah. Determined by H. H. Whetzel.

MUSCARI BOTRYOIDES, grape hyacinth.

+Sclerotium sp.,

Missouri - August 1. (Scott).

NARCISSUS SPP., narcissus, jonquil.

Aphelenchus subtenuis Cobb, bulb and stem nematode.

+*California - one-third of shipment imported from France, showed infestation; a description of this species and symptoms caused by it will be found in the U. S. Department of Agriculture. Official Record of May 26, 1926.

Fusarium sp., basal rot.

+Washington - Puyallup. (Dept. Pl. Path.).

+Oregon - (McKay).

+California - (Scott 45: 559).

See Bibl. Lewis (26) and Weiss (53).

Sclerotium sp., dry rot.

+Missouri - a serious dry rot developed in stock bulbs in a bulb producing section of the state; August 1. (Scott).

Tylenchus dipsaci (Kuehn) Bast., bulb nematode.

*Virginia - Arlington County, October 12. (Woods).

+*Kansas - Rosedale, August 6. (Weiss).

Oregon - much less prevalent than formerly due to almost universal use of hot water treatment for control; it is reasonable to expect practically complete eradication of the pest from the state in two more seasons' time; spreads faster in moist season; Forest Grove, February 21. (McKay).

California - (Scott, 45:558).

Mosaic, or gray disease, undetermined.

+Virginia - present in all varieties grown as bulb stock in Norfolk section. (McWhorter).

+Oregon - quite prevalent in some stocks and is gradually increasing as control measures are practical for elimination or reduction; appears to spread by contact of plants in row; Corvallis, February 21. (McKay).

+California - (Scott, 45:562).

NUPHAR ADVENA, spatterdock.

+Phyllosticta nymphaeicola Tehon and Daniels.

Illinois - Olney, August 28. (Tehon and Daniels, 50:117).

PAEONIA SP., peony.

Botrytis paeonia Qud. blight.

Reported from Massachusetts (Davis), Connecticut (McCormick), Pennsylvania (Thurston), New Jersey (White), Delaware (Adams), District of Columbia (Martin), Maryland (Norton), Virginia (Haskell), West Virginia (Giddings), Ohio (May), Indiana (Mains), Michigan (Nelson), Wisconsin (Vaughan), Minnesota (Sect. Pl. Path.), Colorado (LeClerg), Washington (Dept. Pl. Path.).

Botrytis sp., blight.

+*Maine - peony shoots, blackened above and below and throughout including the leaves yielded copious fruiting growth of *Botrytis* upon being put into a damp chamber while plantings from the stem gave only a *Phytophthora*. A similar association was reported in 1923 by Clinton for Connecticut. (Pl. Dis.Reptr. Suppl. 37:402). (Folsom).

Conn. - one report of serious injury; Wallingford, May 14. (McCormick).

Caconema radiculicola (Greef) Cobb, root-knot.

+New Jersey - New Brunswick, August 24. (White).

Wisconsin - Ozaukee County. (Vaughan).

Cladosporium paeoniae Pass., leaf-mold.

+*Vermont - Charlotte, August 15. (Weiss).

+*Rhode Island - Newport, September 2. (Weiss).

New Jersey - appeared only after blooming, rather severe in Middlesex but very slight in Cumberland County; New Brunswick, September 4. (White).

+*Virginia - Reswick, August 29. (Weiss).

+*West Virginia - Janelew, Lewis County, June 22. (Martin).

Michigan - found abundantly in commercial plantings; increasing in importance. (Nelson).

Iowa - common; causes considerable killing of leaves; damage probably slight. (Archer).

Phytophthora sp., stem blight.

+*Maine - associated with *Botrytis*; July 1: See Sci. 54:170. (Folsom).

+New York - Schenectady, June 19. (Chupp).

Indiana - serious loss in seven acre field; worst on varieties Felix Crousse and Festiva maxima; Knox County. April 28. (Pierce).

Septoria sp., leaf-spot.

+*Maine - on var. Rosette; Portland, August 9. (Weiss).

+*Rhode Island - Newport; September 2. (Weiss).

+Washington - Mason, June 13. (Dept. Pl. Path.)

Mosaic, undetermined.

+*Vermont (Weiss), *Virginia (Wingard), +Kentucky (Valleau), +Iowa (Archer).

PAPAVAR ORIENTALE, oriental poppy.

+*Rhizoctonia* sp., damping off.

Indiana - Lafayette, June 1. (Gardner).

Leaf-spot, bacterial.

Virginia - Norfolk, June 2. (McWhorter).

PELARGONIUM SP., geranium

Bacterium erodii Lewis, bacterial leaf-spot.

- Connecticut - New Haven, August 5. (Clinton and Bender).
Bacterium pelargonii Brown, bacterial leaf spot.
 New Jersey - caused complete defoliation of plants in cold frames; local; Newark, August 13. (White).
 +Delaware - infection on greenhouse plants but did not cause any loss. (Adams 1).
Bacterium sp., bacterial leaf-spot.
 Pennsylvania - Mifflin County. August (Thurston).
 Texas - Falls County. (Taubenhaus).
Botrytis sp., grey-mold.
 +New Jersey - very serious in greenhouse; local; Newark, August 13. (White).
 +*Missouri - damaged foliage in one greenhouse; Boone County. (Scott).
 Minnesota - Mankato, September 17. (Weiss).

PETUNIA HYBRIDA, petunia.

- Mosaic - undetermined.
 +Indiana - local damage. (Mains).
 +Kansas - very common. (Elmer).
 P. r.: Connecticut, Iowa, Louisiana, Pennsylvania, South Carolina.

PHLOX SPP., phlox.

- Cercospora omphacodes* Ell. and Holw., leaf-spot.
 Connecticut - fourteen reports; Manchester, August 1. (Bender and Stoddard).
Cercospora sp., leaf-spot.
 +*Iowa - Shenandoah, September 1926. (Archer).
Erysiphe cichoracearum DC., powdery mildew.
 Reported from Massachusetts, Connecticut, New York, New Jersey, +Oregon. (1925).
Septoria divaricata Ell. and Ev., leaf-spot.
 Reported from *Connecticut, New York, Virginia (the most common and most serious disease of this host. (Fromme)).
 Blight, undetermined.
 New Jersey - on all varieties of host; general; leaves die off from the bottom up; Whitehouse Station, June 9. (White).
 See Bibl. Weiss (52).

PHOTINIA SERRULATA, low photinia.

- +Pestalozzia sp., leaf-spot.
 New Jersey - local; Shiloh, November 17. (White).

PRIMULA SP., primrose.

- Tylenchus dipsaci* (Kuehn) Bast.
 Pennsylvania - bad infection; Harrisburg, December 15. (McCubbin).
 District of Columbia - 2000 out of 4000 plants were discarded by a single grower. (Brown.).

RHODODENDRON SPP., rhododendron.

+Botrytis sp., cinerea type, seedling blight.

New Jersey - causes death of growing tip and eventually whole plant; local; Bridgeton. August. (White).

Cercospora sp., leaf-spot.

+New Jersey - on R. catawbiense; local; Bridgeton, December 15. (White).

+Virginia - locally severe and destructive; Hampton. October. (McWhorter).

P. r.: Florida.

+Guignardia sp., leaf-spot.

New Jersey - on R. maximum, local; Beverly, September 2. (White).

Laestadia rhodora Berl. and Vogel, probably the imperfect stage of this fungus, has been previously reported from New York.

Lophodermium rhododendri Ces.

+New York - on R. maximum; on collected plants from North Carolina; New Rochelle, June 15. (White).

Oregon - Alsea Mt. and Blue River. March to June 1925. (Zeller, 57:137).

+Pestalozzia macrotricha Kleb.

New Jersey - general: Bridgeton. May 4. (White).

ROSA SPP., rose.(cultivated and wild species).

Bacterium tumefaciens EFS. and Town., crown-gall.

Reported from Massachusetts (Davis), Connecticut (Zappe), New Jersey (White), +Delaware (Adams), Maryland (Morton), South Carolina (Fenner), Florida (West), Texas (Taubenhaus), +Arkansas (Young), *Indiana (Dietz), Michigan (Nelson), +Wisconsin (Vaughan), +Iowa (Archer), Washington (Dept. Pl. Path.), +Oregon (Zeller), *California (Horne).

+Blastocladia tenuis Kanouse

Michigan - (Kanouse, 23:301).

Botrytis sp., cinerea type, bud blight.

Reported from New York (Fitzpatrick (15:67), New Jersey (White),

*Mississippi (Martin and Wedgworth), Texas (Taubenhaus), Washington (Dept. Pl. Path.)

Cercospora rosicola Pass., leaf-spot.

Reported from South Carolina (Ludwig and Fenner), *Mississippi (Wedgworth and Neal), *Michigan - collected by Eileen W.

Erlanson. Determined by G. Hamilton Martin. *Kansas - collected by D. V. Layton. Determined by G. Hamilton Martin.

Cladosporium fuscum Link, leaf-spot.

*Mississippi - Lauderdale and Jackson Counties, March 26. (Wedgworth and Neal).

Coniophyrium sp., cane blight and canker.

Reported from *New York, *New Jersey, *Maryland, *District of Columbia, *Virginia, *West Virginia, *Tennessee, *Florida, Texas, *Ohio, *Indiana.

Cylindrocladium scoparium Morgan, crown canker.

New Jersey - 25 per cent reported useless with an additional 50 per cent infection; Madison, February 17. (White).

+*Ohio - Martin's Ferry, January. (Jenkins).

Diaporthe umbrina Jenkins, brown canker.

Reported from *New York, *New Jersey, *Pennsylvania, Delaware, *District of Columbia, *Maryland, *Virginia, *West Virginia, Florida, +*Mississippi.

See Bibl. Jenkins. (21: 161-182).

Diplocarpon rosae Wolf, black spot.

Reported from Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, *District of Columbia, *Maryland, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Louisiana, Texas, Arkansas (severe), Ohio, Indiana, Michigan, Wisconsin, Iowa, Missouri, North Dakota, Kansas, Washington, Oregon. Several reports stated that it had been very severe and hard to control.

Discosia artocreas (Tode) Fr., blossom blight, stem canker.

+*Connecticut - Washington. Collected by Beatrice Hinkle. Determined by G. Hamilton Martin.

+*Mississippi - A. and M. College, March 31. Collected by D. C. Neal. Determined by G. Hamilton Martin.

Ozonium omnivorum Shear, root rot.

+*Arizona - several large bushes killed in a garden at Tempe. (Arizona News Letter, 5).

Pestalozzia rosae Westd.

+*Virginia, on variety Sunburst; Norfolk in May and at Virginia Beach, September. (Martin).

Pestalozzia sp.

+*Mississippi - scattered; March 31. Collected by Wedgworth and Neal. Determined by G. Hamilton Martin.

Phyllosticta rosae Desm., leaf-spot.

+*Iowa - Shenandoah. September. Collected by W. A. Archer. Determined by G. Hamilton Martin.

Sphaerotheca pannosa (Wallr.) Lev., powdery mildew.

Reported from Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Tennessee, North Carolina, South Carolina, Florida, Mississippi, Louisiana, Texas, Arkansas, Ohio, Indiana, Michigan, +Wisconsin, Minnesota, Iowa, Missouri, North Dakota, Nebraska, Kansas, Colorado, +New Mexico, Arizona, Utah, Idaho, Washington, Oregon.

RUDBECKIA LACINIATA, coneflower.

+Mosaic, undetermined.

Indiana - Lafayette, June 28. (Gardner).

SALVIA SPLENDENS, scarlet sage.

+*Rhizoctonia* sp., damping off.

New Jersey - East Patterson, March 25. (White).

SENECIO CRUENTUS, cineraria.

+*Botrytis* sp., cinerea type, leaf-spot.

New Jersey - in many greenhouses; excessive humidity in all cases; Newark, August 13. (White).

+*Verticillium* sp., wilt.

New Jersey - local; Clinton, January 7. (White).

SHEPHERDIA ARGENTEA, silver buffaloberry.

+Cylindrosporium shepherdiae Sacc.

*Utah - Vernal, August 9. (Linford).

SMILAX SP., smilax

+Phoma sp., stem canker.

*Mississippi - A. and M. College, February 20. Collected by H. H. Wedgworth. Determined by G. Hamilton Martin.

SOLANUM PSEUDOCAPSICUM, Jerusalem cherry.

+Mosaic, undetermined.

Virginia - October. (McWhorter).

SPIRAEA LUCIDA, spiraea.

+Cylindrosporium salicifoliae (Trel.) Davis.

Montana - Bozeman, August 22, 1925; collected by P. A. Young. Determined by W. W. Diehl.

+Caenema radiculicola (Greef) Cobb, root-knot.

Mississippi - Lumberton, December 30. (Wedgworth).

TIGRIDIA PAVONIA, common tigerflower.

+Bacterium marginatum L. Mc.

*Maryland - isolated from black lesions on bulbs; Takoma Park. Determination by Lucia McCulloch.

TULIPA SPP., tulip.

+Botrytis tulipae (Lib.) Hopkins, botrytis blight.

Report from *Maine, +Massachusetts, New York, New Jersey (severe general losses, White), +Delaware, **Virginia, +Kentucky (considerable local loss, Valteau), Indiana, +Michigan (general losses in commercial plantings, Nelson), *Wisconsin, Minnesota, +Missouri, Washington, Oregon.

See Bibl. Biekart (8), McKay (34), Scott (45), Westerdijk (54).

+Rhabditis cylindrica Cobb, nematode.

*Arkansas - Little Rock, April 22. Collected by V. H. Young. Determined by N. A. Cobb.

VIBURNUM OPULUS, European cranberrybush.

Phyllosticta punctata Ell. and Dearn., leaf-spot.

**Iowa - Shenandoah, September 1926. Collected by W. A. Archer. Determined by G. Hamilton Martin.

VINCA MAJOR, herbaceous periwinkle.

Puccinia vincae (DC.) Berk., rust.

Massachusetts - caused a serious loss in a greenhouse; Fall River. (Doran).

VIOLA SP., violet.

+Cladosporium sp., leaf-spot.

New York - Onondaga County, September 8. Determined by H. M. Fitzpatrick. (Chupp).

Sclerotium rolfsii Sacc., root-rot.

- +*Virginia - in gardens at Virginia Beach May 30, where the tall ornamental delphiniums are grown, a *Sclerotium* apparently identical with that on delphinium is causing a serious root-rot of cultivated violets. (McWhorter). Cherrydale, July 8. by C. L. Shear.

P. r.: Alabama, Mississippi, South Carolina.

See Bibl. Paintin, (56).

WISTERIA SP., wisteria.

Phyllosticta wisteriae Sacc., leaf-spot.

- +*Missouri - St. Joseph, October 1926. Collected by D. V. Layton, determined by G. Hamilton Martin.

P. r.: *Texas.

YUCCA SP., common yucca.

Coniothyrium concentricum (Desm.) Sacc.

- +Colorado - widespread; found on old leaves; July 1. (LeClerc).

P. r.: Alabama, *Idaho, Indiana, *Iowa, *Maryland, *New Jersey, *New York, *North Dakota, *Virginia.

ZANTEDESCHIA AETHIOPICA, common calla-lily.

Bacillus aroideae Town., soft-rot.

- +*Pennsylvania - Carlisle, (Weiss).

P. r.: Indiana, Maryland,

ZINNIA ELEGANS, common zinnia.

Cercospora atricincta Heald and Wolf, leaf-spot.

- +*South Carolina - Shelton, September 9. (Diehl and Ludwig).

P. r.: Florida, *Texas.

Erysiphe cichoracearum DC., powdery mildew.

- +South Carolina - Clemson, College, September 5. (Ludwig).

- +Indiana - Lafayette, November 3. (Gardner).

- +*New Mexico - unusually severe, State College, September 7. (Crawford).

Mosaic - undetermined.

- +Connecticut - greenhouse plants which were kept too near mosaic plants became accidentally infected. (Clinton).

- +Kansas - very common. (Elmer).

P. r.: Iowa.

D I S E A S E S O F M I S C E L L A N E O U S H O S T S

CHAMAEDAPHNE CALYCVLATA

Melampsoropsis cassandrae (Pk. & Clint.) Arth., leaf spot. **Minnesota.

DESMANTHUS ILLINOENSIS

Cercospora desmanthi E. & K., leaf spot. ** South Dakota.

EPILOBIUM ANGUSTIFOLIUM

Ramularia cercosporioides Ell. & Ev., leaf spot. **Montana,

EPILOBIUM COLORATUM

+Plasmopara epilobii (Rabh.) Schroet., downy mildew. New York.

ERIGERON ANNUUS

+Aster yellows. Kansas.

FRAGARIA AMERICANA

Mycosphaerella fragariae (Tul.) Lindau, leaf spot. **Wyoming.

FRAGARIA VIRGINIANA

Cercospora vexans Masee., leaf spot. **New York.

HERACLEUM LANATUM

Cylindrosporium heraclei (Desm.) Ell. & Ev., leaf spot. **Montana.

LATHYRUS SULPHUREUS

**Urophlyctis lathyri (Bjorn.) Palm., crown wart. Oregon.

LEPTILON CANADENSE

**Aster yellows virus (?) yellows. Maryland.

NICOTIANA TRIGONOPHYLLA

**Oidium sp., powdery mildew. New Mexico.

OENOTHERA BIENNIS

Erysiphe polygoni DC., powdery mildew. +New Jersey.

OENOTHERA LACINIATA

Erysiphe polygoni DC., powdery mildew. **Virginia.

PHYTOLACCA AMERICANA

+Ozonium omnivorum Shear, root rot. Texas.

PLANTAGO SP.

Ovularia obliqua (Cke.) Oud., leaf-spot. **Ohio.

RANUNCULUS SEPTENTRIONALIS

+Didymaria didymia (Ung.) Schroet., leaf-spot. Indiana.

RUDBECKIA LACINIATA

+Cercospora rudbeckiae Pk., leaf-spot. New York.

SHEPHERDIA CANADENSIS

**Cylindrosporium sheperdiae Sacc., leaf-spot. Montana.

SMILAX HISPIDA

Puccinia smilacis Schw., rust. **Missouri.

TARAXACUM OFFICINALE

**Protomyces pachydermus Thuem. Utah.

Ramularia taraxaci Karst., leaf spot. **Missouri.

THALICTRUM POLYGONUM

- *Phytophthora thalictri* Wilson & Davis, downy mildew. +New York.

VACCINIUM PARVIFOLIUM

- Calypsotheca columnaris* (A. & S.) Kuhn, witches broom. +Oregon.

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